

# MICHIGAN FARMER.

Devoted to Agriculture, Horticulture, and Domestic and Rural Affairs.

NEW Perfect Agriculture is the foundation of all Trade and Industry.—Liebig. SERIES.

VOL. V.

DETROIT, DECEMBER 6, 1847.

No. 11.

## Remarks in the N. Y. Farmers' Club.

### DEPTH OF MANURES.

Chairman.—The subject of the day is in order.

Dr. Underhill.—I am prepared in some measure, to give my idea of the fertilizing elements of manures when placed in the soil, and of the peculiar depths at which they should be placed according to the various soils. We are not yet fully able to demonstrate all this, but let me premise by the remark, that probably, near one hundred millions of dollars worth of manures are annually applied to the soil of the United States; and that by putting them on too near the surface—we lose one half by escape into the atmosphere, in the course of our long hot summer. One important object is, then, to save as much as possible of this amount, by a judicious disposition of them. It may be stated safely that one-third of all our expense in farming is the manuring of our lands. The question under consideration is, Do the fertilizing elements of manure ascend or descend? Do they always rise? When the rain falls and dissolves them, they descend to a certain extent, but when the sun shines again they ascend. I have managed my farm on this theory, and I have placed my manures deep in the soil. The proper depth depends on the kind of soil—if we put manure on the surface of sandy land, like much of that of Long Island, it is soon lost under the strong solar heat. In such soils on my farm I put it deep, and in a drought I find the effect excellent. I do not put it so deep in stiff clay soil, nor in a cold soil. When the manure is deep, the first growth of plants is slow, but soon appears the vigorous influence of the manure below. It has been observed a long time that there is a peculiar vigor in the vegetation in grave yards—and it has been also observed that in such yards when old, no interments having been made in a long time, they become sterile. And it has been noticed that where sand has been carried upon rich vallies, that land soon becomes fertile—the fertilizing elements ascend! Place a thin covering of straw over poor land, and the places covered are found soon to become rich. The covering arrests the ascending elements of fertilization, and confines them to the surface of the soil. In North Carolina it was remarked that when the soil was covered by leaves of the pine tree, it was rapidly enriched. So a coat of clover arrests the flight of the fertile elements and enriches land. All that is fertilizing in manure is soluble or gaseous. What would

be the thickness of soil in primitive forests, if fertility should never ascend? Yet we find it on the levels where it has never been washed away—but about eighteen inches! The elements do not ascend as rapidly in clay soils as in porous, sandy land.

I covered a sandy field with a coat of clay, and found great benefit to the soil by it. For the purpose of putting our manures deep, it is necessary that we should plough deep. The justly celebrated Buel strongly recommended it. The salts, &c., in solution in the soil, ascend by capillary attraction to the surface. A fall of snow late in spring has been remarked to cause fertility—grasses especially show this power.—I covered my orchard with clover, and it enriches the ground, and I find more vegetable mould there than there was before. Our clear sky and great solar heat cause a great loss in the fertility of our soils. In a cool, moist climate like that of England, the results are not the same—a top dressing of manure is good in England, but almost worthless under our sun. Long Island farmers should put the manures deep in their porous sandy soils. In what is called a cool season here, we always raise the best vegetables. Not only do the fertile elements rise, but caloric rises also. I have found ice half an inch on the ground in my orchard, and yet the apples on the trees entirely untouched by frost. This is due to the rising of caloric in the body and limbs of the trees during the night.

Judge Van Wyck.—Manures both ascend and descend. By which process is the loss greatest? That must depend on the nature of the soil.—Loose porous land admits water containing in solution the elements of manure, to descend readily to the bottom, and then find its way to the valleys through the strata. Rich earth absorbs the gases of manures and water too, for the uses of vegetation—and the richer the earth the less of the manure goes down. One cubic inch of water will absorb four hundred and seventy-five cubic inches of some gases.

It is certain that long drought lessens the manure in our land, but it is not so certain that putting the manure deep will prevent this. Sir Humphrey Davy's experiment of drying soils perfectly, & then marking their power of attracting and absorbing moisture, proved that the richest soils attract and absorb the most. The elements which descend in porous, ascend in heavy, but rich soils retain them.

Dr. Underhill.—I placed rich muck deep in

my sandy soil, planted grape vines over it, and seven years afterwards, on examination, I could not find any signs of the muck, below where I put it, or any where else—it must have ascended.

#### FEED FOR OXEN.

I am feeding my working horses and oxen with hasty pudding mixed with cut corn stalks, swelled by hot water, (all of course before fed.) After a few days they eat it well, and my oxen improve rapidly, even while working hard. I use one of Jordan L. Mott's sixty gallon kettles to cook the meal. For swelling the cut corn stalks, the hot water must contain some salt.—Fresh water can only be heated to 212 degrees—but with salt added, it is capable of receiving a much higher degree of heat. In a hogshead half full of cut corn stalks, put in three gallons of boiling water containing one quart of salt, cover the hogshead with a blanket, and let them swell and steam. When cold, take them as dry as they will drip; then mix them with hasty pudding, and any animal of good fair common sense will eat it.—*Prof. Mapes.*

#### Making and Saving Manure.

There are many substances on every farm, which, while in themselves enriching, may be profitably mixed with the manure to absorb and retain those volatile portions which arise from the process of fermentation.

The first material I shall name, is swamp muck. It may be truly said, that the farmer who owns a muck hole of good quality, and knows how to use it, is possessed of a mine of wealth which will surely render his farm productive and profitable. I speak advisedly upon this subject, having used the article for several years in every variety of form. I say, without fear of argument or contradiction, that a compost, properly made, of two loads of muck to one of good, fresh manure, is equal, in its effects on gravelly or sandy soils, load for load, to green manure.

In order to manage muck to the best advantage, the farmer should so contrive matters as to get a year ahead with his manure, so as not to be obliged to use it until his compost is fully ripened. In my opinion, formed from repeated trials, the noxious acids must be fully expelled from the muck by age and fermentation, to reap full benefit from its application to the soil.

August and September are generally the most favorable months for digging muck. First, then, the swamps should be thoroughly drained—there should be no half way work here, for the benefit to be derived from it will fully warrant the undertaking, even if considerable expense is necessary. When drained, commence carting the muck to a suitable and dry spot on the field where it is to be used. Lay the cart loads of it in two rows, as long as the heap is to be when finished, with a space say of six or eight feet between.—First spread down of the muck on each side, in-

to the space between, a layer, ten or twelve inches thick, and then haul on the manure from the windrows, driving up to the ends of this bed, and throwing in from the cart on to it a layer, say eight inches thick, of manure—the workmen should not drive on to the bed and tip up the cart, to save labor, for reasons presently to be given—another layer of muck, shovelled on from each side, and then manure, using two loads of muck to one of manure, and so on until the heap reaches about five feet in height, the last covering being of muck. Care should be taken to lay the compost up as lightly as possible, in order to secure perfect fermentation. The team should not be driven up on to it, as we have seen farmers do, nor should even the workmen tread on it. For the same reason the heap should not be built too high, as the pressure upon the bottom courses will be so great as to prevent their rotting down thoroughly.

The compost gets into a general heat sooner or later, after it is made up, according to the weather or season of the year. It is proper here to remark that the summer months are most favorable for making up the heaps, although they may be made up as late as November. In this case, however, a greater proportion of manure must be used, and the heaps will need to be shovelled over the next April to fit them for spring crops. I have also composted muck both with lime and ashes, when the quantity of dressing for my land was not sufficient from my muck and manure compost. Last season I made a compost of sixty one-half cords of muck, and six casks of lime, seven bushels to the cask, and applied it to a field of ten acres of corn, using the manure compost as far as it would go, and then the lime and muck. The corn compared favorably, on the part of the field dressed with the lime and muck, to that where manure and muck was used; the whole field averaging a little better than sixty bushels per acre. I have also found that five or six bushels of ashes to a half cord of muck, makes a compost equal to either of the others. A load of leached ashes to six loads of muck, is also a good compost for sandy land.

In applying these composts to the soil, I have found, after trying it by spreading on to the grass ground, before breaking up and turning it under the whole depth of the furrow, and also by spreading on top of the furrow, and harrowing it in, that neither way was best. It is difficult to bury thirty or forty loads per acre sufficiently with the harrow, and turning it down to the bottom is too deep. I therefore do my breaking up late in the fall—say in November. The frost of winter completely pulverises the surface, and kills the grass roots, so that in the spring I have a clean bed to work upon. The compost is then spread, thirty or forty loads per acre, and harrowed first, and then covered three or four inches with the plow. This I can easily do, as I always break up my grass land from six to nine inches deep,

varying with the quality of the land. By this mode of practice, my corn crops always average as high as sixty bushels per acre, and on my best land sometimes as high as eighty bushels.

Having now given my experience with composts, I have something to say of the barn-yard. And by the way, Messrs. Editors, how many yards you will see upon a side hill, with perhaps a brook running by or near the lower side, where all the cream of the yard runs to, benefitting nobody knows who. Instead of this kind of management, the yard should be made considerably dishing towards the centre and the sides will then be dry to walk around. A good supply of muck should be hauled to the yard in August or September, where, if the yard is shaped right, it will absorb all the liquids and wash of the higher parts, and retain them until wanted. The yard should be cleaned out after haying the next season, and the contents laid up in square compact heaps on the field where wanted. The loads should not be tipped up, to save work, sprawling five or six loads over a quarter of an acre, exposing a needless surface to evaporation, but nicely laid up; the straw and stalk litter and the liquids of the yard among the muck, will ferment it strongly, and the next spring it will be a black, free mass, and spread like garden mould.

In addition to supplying the yard liberally with muck, a quantity of leaves may be gathered, late in the fall, and used for bedding the cattle. Some farmers, instead of this, lay the planks of the cattle stalls with an opening between them of about one-half inch, and so arranged as to be easily taken up. Two feet thick of muck or loam, is put under the floor, and in the spring it is excellent manure.

The hog-pen is also an important help in making manure. Four or five hogs will make from April to December at least thirty loads of most excellent compost, if properly attended to. In fact it is a business which they seem fully to understand and appreciate. The hog-yard should not be extended over too much ground, as there will be a loss by evaporation attending it. The yard should be in as small a compass as practicable, and two or three loads of materials put in at a time. As often as once a fortnight, holes should be made in the manure with an iron bar, and corn dropped into them. By attending to this operation, the hogs will work the compost over from top to bottom.

Every farm has not muck upon it, but every farm has something in the shape of enriching materials which may be profitably carted to the yards. Rich turf, thickly matted with grass roots, and dug about two inches deep, is an excellent material with which to cover a yard.—The accumulation of leaves and vegetable mould in the hollows and at the foot of hills in woodlands—the accumulations by the sides of stone walls and fences in the lots, are also good. Every observing and enterprising farmer will find

something on his farm, with which he may profitably increase his stock of manure.

I think that observation will fully justify me in the remark, that the farmers of New England might generally double the quantity of their manure heaps, without detriment to the quality, by attending to the collecting of those substances to be found on every farm, which, while enriching in themselves, absorb and retain much of the liquids and gases of the manure, which would otherwise run to waste.—*Cultivator*.

Brattleboro, Aug. 17, '47. F. HOLBROOK.

#### Culture and Distillation of Peppermint.

In this section of New York, there is an article alike valuable for its medicinal and other uses, which has been cultivated with great profit to the producers, that has hardly attracted attention even in the immediate neighborhoods of its production. I allude to the article of *Peppermint*, and its distillation into oil, and its manufacture into essence.

It is to invite attention to this subject, that I am induced to give you a brief history of its cultivation in this neighborhood. Its cultivation is principally confined to a few persons in Phelps township, in this county, and Lyons and Arcadia townships in Wayne county. It is cultivated without any serious interference with the necessary attention to other crops, and has yielded, for some years past, some fifty or sixty thousand dollars annually to the producers.

The principal expense in its cultivation is in procuring the roots for the first year's crop; and the chief labor is in the first year's cultivation.—The ground should be rich, and should be carefully plowed in the fall or spring, so as to be entirely free from grass and weeds.

It is cultivated from the roots, which should be planted in the spring, in drills from eighteen inches to two feet apart, and should be cultivated carefully with the hoe until after mid-summer, at which time it sends forth runners or shoots, like the strawberry, and covers the entire space planted, sending forth innumerable branches and stocks. It is cut in the fall when matured, and distilled into oil. The roots remaining in the ground during the winter, vegetate in the spring, and covering the entire space planted, require no cultivation the second year, and so also of the third year. By the end of the third year, the ground becomes so exhausted, and so infested with grass and weeds, that it is necessary to plow up the roots, and plant fresh grounds. So the first year is the only one of expense or labor in the cultivation, as it requires no cultivation the second and third years. The crop is exhausting to the land. Lands have rented from eight to ten dollars per acre for the purpose of raising this mint upon them.

If the seasons are favorable, and the lands rich, the crop the first year will yield mint that will produce from ten to thirty pounds of oil to the



acre. The second year (which is the most productive) from twenty-five to forty pounds; and the third year from ten to thirty pounds.

The process of distilling the mint into oil is simple: The mint when mowed, on maturing, is placed in an ordinary still boiler with water, and fire is placed beneath. The evaporation is condensed in a retort, and the oil being of less specific gravity than the water, floats on the surface. The water in the retort is permitted to escape by a tube beneath the surface of the water in the retort, on which the oil floats. The mint, after being distilled, is taken from the boiler with a hook, and the boiler filled with fresh mint and water, until the whole crop is distilled into oil.

The process of purifying it from all extraneous matter, is to filtrate the oil through clear white paper. It is then placed into tin canisters, containing about twenty-five pounds, and tightly corked and sealed, and is then prepared for market.

Many persons, who have cultivated it for years, have realized handsome fortunes, and without interfering with the regular production of other crops on their farms.

ELIAS COST.

Oaks' Corners, Ontario co., N. Y. Sept. 1, '47.

From the Ohio Cultivator.

#### Construction of Lime Kilns.

MR. BATEHAM: In your paper of July 15th, you request some one to give a description of the form of a lime kiln, and the materials for constructing one. I have a kiln on my farm, in Wyandotte county, after this form: it stands on a level surface, (though a side hill is better,) it is  $7\frac{1}{2}$  feet wide in diameter, (inside,) at bottom, increasing in size to the height of 6 feet, where it is 12 feet in diameter, then diminishing in the same proportion for 4 feet more in height, making in all, 10 feet in height, and the inside form nearly like the shape of an egg, with the smallest end downwards. This kiln will hold from 600 to 800 bushels of lime.

Now for the outside form: lay off the foundation 16 or 17 feet across, (outside,) dig a place for the wall about 1 foot in depth and 3 feet in width. Any kind of stones will answer, but such as will bear a red heat are to be preferred. Lime stone will do, only a portion of the inside will burn off, so that the wall will need to be rebuilt after a few times using. Lay the wall with sand and lime mortar, and make two mouths, or openings for putting the wood in, [on opposite sides we suppose—Ed.] Make the openings  $2\frac{1}{2}$  feet in width, to the height of  $2\frac{1}{2}$  feet, then narrowing to a point at  $4\frac{1}{2}$  feet in height.

In putting in the lime stone, build an arch in the form of the openings, taking the largest sized stones for the arching. When filled, round it at top with small sized stones, and plaster it over with a thick coating of clay mortar, leaving a draught place, say  $3\frac{1}{2}$  or 4 feet in diameter in the

centre, on the top. In filling, put four or more bars of cast iron across the arch, near the bottom, to keep the wood from the ground, so that the ashes can be drawn out, and to secure a draught.

Lime kilns are very apt to burst in cooling, and the thicker the walls are the better. For the same reason, as well as for greater ease in filling, it is better to build in the side of a steep hill or bank, where such a situation is afforded. The walls, of course, need not be as strong where surrounded with earth.

Yours, &c.,

J. HANNUM.

Sandusky Co., O., 1847.

*Additional Directions by Prof. Jackson.*—The following remarks on constructing a lime kiln, and burning lime, are taken from Prof. Jackson's report on the Geology of the State of Maine:

"The kiln is of a cylindrical form, rather wider outside at the bottom than at the top, so as to give it more solidity. It is 10 feet high, and 5 feet in diameter at the top, while the bottom internally contracts a little, so as to support the charge. This contraction is unnecessary, excepting where the lime stone crumbles or "*fine burns*," during its calcination. The arch may be made four and a half or five feet high, and two and a half or three feet wide so as to allow room for discharging the lime, after it is burned. The kiln may be made of any rock, capable of withstanding a dull red heat. Talcose slate, mica slate, or even common clay slate, will answer. It must be pointed with clay inside, and with mortar on the outside. In charging this kiln, the stone is broken into suitable sized pieces, and an arch is built up, corresponding with the arched opening and extending quite across the diameter of the kiln. Having laid up this arch loosely, pack the kiln in a careful manner, until it is half full of the broken lime stone; then you may throw in the smaller pieces on the top, and fill the kiln entirely. It is now set for burning, and you have only to place the wood and kindle a fire in the arch, keeping the heat gradually increasing, until the lime stone is sufficiently burned. This may be known either by the time required, or by the appearance of the pieces at the top of the charge. It will generally be noticed, that when the fire has done its office, that the smoke ceases to appear at the top of the kiln, and a flame rises through the interstices at the top. The charge begins also to settle a little. The time required for the burning of lime, varies with the different kinds of lime rock, and hence it is alone to be learned by experience in a particular case, and with the kind of kiln with which the lime burner is acquainted. One or two fair trials, will teach any intelligent man how to do the work in a proper manner. The cost of the lime prepared in a small kiln, is always a little more than when it is made in a large way; hence where an extensive demand exists, the three hundred cask kiln would prove the most profitable to the manufac-

turer. Most of the lime stones here described, may be burned at the cost of twenty-five cents per cask, in bulk—or for fifty cents, packed in casks. Where it is to be used on the spot, in agricultural improvements, it may be thrown out of the kiln, and allowed to slake itself, and then it is ready for immediate use. Its weight is increased from thirty to fifty per cent. by slacking, and its bulk is tripled or quadrupled; hence, where it is to be transported to a distance, it is better to take it in its caustic state, either in bulk or in casks.

A shed ought to be built near the kiln, so as to keep the lime under cover, to prevent its being wet by rain.

Rock, fresh from the quarry, burns more easily than after it has become dry by lying exposed to the action of sun and air.

#### Saltetre.

This substance is a compound of nitric acid with potash, (nitrate of potash.) Of late years, potash has come into extensive use in manuring lands in grass, and is, for that purpose, highly valuable. We have frequently applied saltetre around fruit trees, and its operation has always been most salutary. We have never made any experiments with it on grass or grain lands, which could be considered as otherwise than successful, although from circumstances not necessary to be specifically detailed here, our efforts in testing its value as an application to field crops have been on rather a limited scale, and conducted with less minuteness than to us appears necessary in order to form a correct estimate of its worth. We have often placed in our corn hills, at planting, the mould taken from beneath our outbuildings, and have ever found the application attended with the most gratifying results. When the great China Tree Corn Humbug was at the height of its popularity, we planted seventy hills, in which this species of manure was alone used; the corn grew remarkably strong, eared well, but failed to mature a kernel. A few hills immediately contiguous, of the same kind of corn, were manured with old, well decomposed stable dung, of which two large shovelfull were allowed to each hill, but the corn, although it started early and grew well for a time, was far less vigorous than the first; it formed ears but there was *no cob*, and consequently no corn. It is well known that the soil under barns and all other buildings becomes, in a few years, strongly impregnated with *nitre*; and this is especially the case with soils under "tie-ups" and places where it receives the stale or urine from the floors above. If soil thus circumstanced be permitted to remain undisturbed for several years, and then be shoveled out and exposed to the atmosphere for a short time, its surface will be found completely incrustated with *nitre*, like a white frost. In this condition, it is probably somewhat too powerfully im-

pregnated with the salt to be used successfully for ordinary agricultural purposes, and should be used with great care. Saltetre, or *nitre*, is also frequently used as a steep for seed corn, for which purpose it is deemed highly valuable. In attestation of this fact we have the corroboration of our own somewhat extended experience, as well as the statements of hundreds, all of whom speak of it for this purpose in terms of unqualified approbation. The following, cut from the Watertown Standard, is, however, all that we can find space for at present.

*"Important to Farmers.*—Hart Mussey, Esq., of this village, took a small portion of the seed corn with which he planted a field, and soaked it in a solution of saltetre, (*nitre*), and planted five rows with the seed thus prepared. Now for the result. The five rows planted with the corn prepared with saltetre, yielded more than twenty-five rows planted without any preparation.—The five rows were untouched by the worms, while the remainder of the field suffered severely by their depredations. We should judge that not one kernel, saturated with saltetre, was touched, while almost every hill, in the adjoining row, suffered severely. No one who will examine the field will doubt the efficacy of the preparation. He will be astonished at the striking difference between the five rows and the remainder of the field."

Mr. M. furthermore states that he tried the efficacy of *nitre* on one of his apple trees last spring. "It is now," says he, "a fine healthy tree, about twenty-five or thirty years old, and is in fine condition and full of young fruit."

We hope the real value of *nitre* will soon be fully understood by our farmers, and as it is a cheap article and easily obtained in most localities, we see no reason why its true character should not be ascertained, experimentally, by all.  
—Maine Farmer.

#### Depending on a Single Crop.

Some farmers whom we know, advocate the idea of dividing the labor of farming in such a way that but one kind of produce should be raised on a farm or section of farms—such as hay, or potatoes, &c. This is bad economy. It may be right and proper for every farmer to consider the capacity of his farm—what it is best fitted for, and make that a leading object. But to depend upon a single article of produce is not the best economy. This is done on many plantations of the South, where attention is turned wholly to cotton alone, or sugar or tobacco alone; but if the statements of the most judicious observers among them can be relied upon, it is not the most profitable mode of management.

Ireland has depended for years on the single article of potatoes, and how has she fared at last? One of the most unprecedented famines of modern days was the result. A writer, over the signature of "Reviewer," in the November num-

ber of the American Agriculturist, says that a friend of his left New England, where he had been accustomed to raise every thing, and settled on a large plantation of the western prairie land. He writes him, "I am ruined. I have spent every thing I had, and am in debt besides, in putting in four hundred acres of wheat upon this rich, tempting prairie soil, and it is all winter killed. I did not intend to put in any spring crop, having previously determined to devote all my attention to wheat; and now I cannot, for I have no means. Well, I have learned a good lesson—never to rely upon any one crop."

We think those among us who are getting into the one crop system, would be wise to profit by the experience of others in this thing.—*Maine Farmer.*

From the Farmers' Cabinet.

#### The Principle of Draught.

It seems an almost universal opinion, that the nearer the horse is attached to the load, the lighter will be the draught; for then, the horse by lifting, is enabled to overcome a considerable portion of the "downward weight of friction." And this is prettily exemplified in the child who, when the fore-wheels of his little wagon have dropped into a hollow, steps back, and shortening his hold on the tongue of the wagon, lifts the wheels; and he is then enabled to drag it out easily enough. Still, however, a medium is to be observed, for the horse is oftentimes placed so far back and tight in his gearing, as not to be able to apply his whole strength to the object; as we daily witness.

But this view of the case cannot be made to apply to the operation of plowing, for there, all all lifting is to be deprecated; although the shortening of the draught, by means of the clevis and traces, as well as the backbands, is strenuously defended and universally practised; than which, there cannot be a more egregious error. In the first place, the plow must be set so as to *swim*, without the smallest tendency either to rise or sink; and then it is of no importance what might be the length from the clevis at the head of the plow to the swingle tree; it may even be doubled, without adding an ounce to the draught of the plow, which has merely to be drawn forward at the properly adjusted depth.

The Scotch are supposed to be the best ploughmen in the world, but although I may not be ready to admit this to its full extent, they have convinced themselves of the correctness of this theory, and always use a considerable length of single chain on the head of the plough; by which means they are enabled to obtain a far more easily directed leverage, and to guide the plough with greater facility as well as accuracy, without, let me repeat, increasing the draught a single ounce. And I have observed, that many of the Prouty & Mears ploughs have a swivel and link attached to the head, which lengthens the draught about five

or six inches; but I have abundant reason to know, that so far from the draught being increased thereby, it is very much reduced, by the ease with which the ploughmen are enabled to guide them; and at the same time, one-half the inconvenience arising from the hugging or bearing away of the land-horse, is obviated by the additional length of leverage and the steadiness obtained by the use of the swivel. And I am convinced also, that if this link and swivel were to be increased to the length of a foot or even more, the dynamometer would not show that the draught had been at all increased, provided the plough has been properly adjusted by means of the clevis, or the vertical screw, as in their ploughs of modern structure, so as to exhibit no tendency either to rise or sink in the ground. This is a subject of much importance, but so far as I know, but little understood and less attended to. Would your practical readers put it to the test of experiment?

R.

Burlington, N. J.

**How to make Saur-kraut.**—Take as many drum-head cabbages, or any other kind having a firm heart, as you wish to preserve, tear off the outer leaves, quarter them, cut out the stalks, and chop the remainder into small pieces by hand or with a machine. Then, to every 100 lbs. of cabbage, take 3 lbs. of salt, 1 lb. of caraway-seed, and 2 oz. juniper-berries, and mix them together in a dish or bowl. Then procure as many clean casks, strongly hooped with iron, as may be required, and fill them with layers of the chopped cabbages, about 3 inches thick, sprinkling each layer, as it is pressed in, with the mixture of caraway seed, juniper-berries, and salt. When each cask is full, lay over it a coarse linen cloth and a wooden follower or lid, just fitting within the mouth of the cask, upon which must be placed a stone or weight sufficiently heavy to prevent it from rising, and allow it to ferment for a month. The cabbage produces a great deal of water, which floats around the sides of the casks to the top of the follower or lid. This must be poured off, and its place supplied with a solution of lukewarm water, whole black pepper, and common salt, taking care that the cabbage is always covered with brine. In order to keep the kraut fresh and for a long time, the casks should be placed in a cool situation as soon as a sour smell is perceived.—*American Agriculturist.*

**Smoked Mutton.**—The Editor of the Tennessee Farmer declares his preference for the ovine over the bovine or the swinish race. He says on his knowledge of physiology,—which none will dispute,—that a pound of lean, tender mutton, can be procured for half the cost of the same quantity of fat pork; and that it is infinitely healthier, in summer, especially; and that those who feed on it become more muscular, and can do more work on it, with more ease to themselves. He knows of nothing more delicious than smoked mutton hams.



### The Apple Tree Worm.

In gathering my fruit this fall, I discovered what I had never noticed before, that many of my apples were injured by a worm.

I had to cut open several apples before I could get a sight of one of them, as they had made their escape at the side of the apples. I supposed when I commenced my search, that I should find the villain to be nothing more nor less than the plum weevil; but as I could trace by his physiognomy no relationship between them, I concluded he must belong to a new race of "varmints." From the following notice, however, which I find in the Western Farmer and Gardener, I am inclined to think that he is an old offender, well known at the east. The remedy suggested I should think a good one.

A—.

There is a most mischievous enemy of the apple, that attacks the fruit only; and where it prevails is known as the apple worm. It is a true catterpillar, not a grub, like the plum and cherry weevils; and is the larvæ of the moth called *Carpocapsa pomonella*, the codling or fruit moth.

A good description of this worm, with figures, may be found at page 230 of Kollar's work on insects. In some years this apple worm has been so common in New England that a very large part of the apples were rendered worthless by it. It is very rare in the interior of the States, but we have occasionally met with it, and it is to be apprehended it will become still more common. The moth appears in the latter part of June or beginning of July, and without puncturing the fruit, deposits its eggs in the hollow at the blossom end of the fruit, where the skin is most tender, and the worm the least liable to disturbance. As soon as the worm is hatched, which is in a few days, it commences eating into the young fruit, making its way from the eye towards the core, and marking its presence by the powder thrown out of the opening. The moth seems to prefer early to late apples, and the thin skinned summer fruits suffer the most extensively. In the course of two or three weeks the worm has burrowed to the core, and attained its full size. To get rid of the matters made in its excavations, it cuts a round hole through the side of the apple, and thus is enabled to keep its burrow clean. Sometimes the worm leaves the apple before it falls, but usually the injury it has received causes it to fall prematurely, when the worm quits it, and spins a cocoon, in which it changes to a chrysalis, and in a few days more the perfect insect appears, to renew the work of destruction. These are only the earlier ones; the later ones do not perfect their transformations till the ensuing spring. The surest mode of destroying the apple worm, is to allow swine to run in the orchard, to gather all the fruit that first falls; or where this cannot be done, to pick them up by hand and feed them to some animal. The plum weevil and the apple worm are distinct

insects. The plum weevil has been found in the apple, but the apple worm never in the plum.—*Gaylord's Prize Essay.*

A writer in the Boston Cultivator, in noticing the caution which has been pretty freely disseminated through the Journals of the day, against the use of the Rhubarb or pie plant, in consequence of its containing *oxalic acid*, considers it a *Humbug*, as will be seen from the following extract.

A—.

Messrs. Editors, I consider the whole thing a humbug, but brought as it has been before the public, it may have some effect on the weaker portion of our species, who still seem frightened out of their *proprieties*. We well remember the humbugery of tomato pills. But what, after all, is *oxalic acid*? Parker informs us it is found in sorrel, and is composed of oxygen, hydrogen and carbon—precisely the ingredients composing the *malic*, or *apple acid*—a poison too, be it remembered! and its radical exists in sugar and all saccharine substances, requiring only the addition of the oxygen, to form true *oxalic acid*! So there is life for us a little longer, you see, and a great many more rhubarb pies in store, I humbly hope and pray! But what an accumulation of poison must be contained in the sugar used in sweetening them! And yet I like the sweet, I confess, in spite of the awful "discovery."

### PIE PLANT.

*Usefulness of the Nettle.*—The nettle is generally considered by farmers and gardeners as a useless and troublesome weed; but it needs no argument to prove that the most common gifts of Providence are often the most useful to man.—The common stinging nettle is one of the best medicines which are produced in the vegetable kingdom, and its medicinal qualities ought to be more generally known and appreciated. In the form of a simple weak infusion, taken in the quantity of a pint a day, it acts as an alterative and deobstruent in impurities of the blood. A strong decoction taken in the same quantity, proves an admirable strengthener in general or partial relaxation. Applied as a fomentation or poultice, it relieves swellings and abates inflammations—and the expressed juice, taken in spoonfuls as the exigency of the case may require, in internal bleedings is the most powerful styptic known. We may add, that its leaves, when boiled, are converted into a tender, healthy, and nourishing aliment, grateful to the palate. And yet there are few plants whose appearance is viewed by the farmer with more disgust.—*Farmer and Mechanic.*

*Bees.*—Swarms should not be kept in a southern exposure during the winter. The bees are apt to be tempted to leave the hive, and thus become chilled and disabled from returning, before they are aware. In summer they should not be exposed to the sun, but shaded.

**About Horses.**

We find the following practical suggestions in an old paper, and they may be useful in these "more enlightened times."

The remark is very often and very justly made, that the breed of horses has greatly degenerated within the last thirty years. The horse is not only the most useful of all animals, but the most expensive to keep—these facts none will deny.

Why, then, we ask, do our farmers keep four or five ill-looking and lean jades to do the work which one valuable horse might perform. We are glad to find agricultural societies in many parts of the country turning their attention to this subject. A little care in procuring and rearing this animal, and the consequent retrenchment of their numbers, would not only greatly improve the breed, but lessen a large item in the expense of our farmers, without depriving them of any of the advantages which they now enjoy. The following remarks upon horses are copied from the publication of an eminent farrier in Europe, and we think them worth the perusal of farmers generally.

The pulse of a horse in health, is from 36 to 40 beats in a minute, and may be easily felt by pressing the fingers gently upon the temporal artery, which is situated about an inch and a half backwards from the fore corner of the eye.

Horses have not the faculty of vomiting or even of belching wind out of their stomachs, and therefore are peculiarly subjected to the choleric.

When a horse has been over-ridden, bloody spots may be seen in the white of his eye.

A limber dock is a sure evidence of a limber back—that is, a weak one.

A horse that is hardy and good for business, has a short back bone, which terminates forward of the hip bone.

A decoction of white oak bark will kill bots by tanning them and they become so shivelled as scarcely to be discernible when discharged.

The principal signs of a good horse are these: The eyes set far apart in the head, and large and bright; the quirl high in the forehead—one or two on the neck is a good sign; the neck well set on, and high; the shoulder blades pretty high, and converging to a point; the breast full and large, and so also behind; the body round, for flat bodied or slab-sided horses are weak natured; the dock stiff; going wide behind, for if the gambrils knock together, it shows that the horse is feeble; chewing the bit when provoked, is a good sign.

**Roads.**—It is a fact often forgotten, that the value of lands depends not only—and often not chiefly—on the state of improvement they are in—or on their productiveness; but essentially, on the facilities for communication between them and market. Roads make farms, and the want of them unmakes them, or leaves them unmade.

A month or two since the *Prairie Farmer* contained an extract from the *Monthly Visitor*, which stated that lands in various places in sterile New England were producing the interest of five hundred dollars per acre—a most astonishing fact, surely. The secret of the fact was, and is, that the lands were not only productive, but their product can be forwarded to a market for sale.—New England is now placing herself on an impregnable basis of prosperity, and making herself a central territory of the Union, by constructing rail-roads in every direction, but all centering with her.

**To prevent Wood decaying.**—Take twelve ounces of rosin and eight ounces roll brimstone, each coarsely powdered, and three gallons of train oil. Heat them slowly, gradually adding four ounces of beeswax, cut in small bits. Frequently stir the liquor, which as soon as the solid ingredients are dissolved, will be fit for use. What remains unused will become solid on cooling, and may be re-melted on subsequent occasions.—When it is fit for use, add as much Spanish brown, or red or yellow ochre, or any color you want, first ground in some of the oil, as will give the shade you want; then lay it on with a brush as hot and thick as you can; some days after the first coat is dried give it a second. It will preserve plank for ages, and prevent the weather from driving through brick work. Common white paint may be used on top of it, if required, for the sake of appearance. Two coats should always be given and in compound machinery, the separate parts should be varnished before they are put together, after which it will be prudent to give a third coating to the joints or any other part which is peculiarly exposed to the action of moisture, such as water-shoots, flood-gates, the beds of carts, the tops of posts, and all the timber which is near or within the ground.—Each coat should dry before the parts are joined, or the last coat applied. The composition should be applied when the wood is perfectly dry. It is necessary to mention that compositions made of hot oil, should, for the sake of security, be heated in metallic vessels, in the open air, for when the oil is brought to the boiling point, or six hundred of Fahrenheit, the vapor catches fire, and though a lower degree of temperature should be used in the process, it is not always possible to regulate the heat, or to prevent the overflowing of the materials; in either of which cases, where the melting is performed in a house, fatal accidents might happen.—*Archives of Useful Knowledge.*

**A Wash for any Fruit Trees.**—One part plaster, one part soft soap, and one part fresh cow manure, diluted with water to the consistency of common whitewash.

To cure scratches on a horse, wash the legs with warm soapsuds, and then with beef brine.



[We copy from the Ohio Cultivator the following amusing report on swine, by the committee of the Lorain Co., (Ohio,) Agricultural Society.]

#### REPORT OF THE COMMITTEE ON SWINE.

The well chosen chairman of the committee on Swine, Mr. George *Bacon*, comes up missing, or rather, I should say, he declines to serve in that capacity, for the reason I suppose, that he is too modest to say what ought to be said in praise of the "*Bacon Family*." I have been elected in Mr. Bacon's stead, to represent the pigs of Lorain, in this assembly, and though I feel myself unqualified for the important station, I assure you I am *very proud of my constituents*. My friend Doctor Hubbard, here, will probably say something of this kind, only a "great deal more so," in case he gets elected next week, to represent the people of Lorain in Columbus the coming winter. Should he do this, his design you know, would be to soap you a little; but as nobody would think of *soaping a pig*, I shall get credit, I trust, for perfect sincerity. Pigs, gentlemen, at the present day, are but poorly appreciated. Feeling this, I am prompted to offer a word or two in their behalf.

Some people call hogs *loafers*, because they don't perform manual labor. But nobody ought to expect *hand* work of a pig, particularly when there are other kinds of work for which he is better adapted. Somebody must do the *head* work, but it is not pigs we want for this, there are pigs enough at head work already. It is *stomach* work we want of pigs, we need them to convert our corn and potatoes, and such like raw materials into articles of higher market value.—At this kind of work hogs can't be beat. No! gentlemen, pigs are not loafers, on the contrary they are among the most productive of all the producing classes. I need not ask where we get our pork, our ham, our bacon, or where the ladies get their lard, or Honorable Congressmen their sausages, or honest saddlers their leather, or brushmakers their bristles, or where we get the oil that turns darkness into day in all our dwellings, or for the beacon light to guide the tempest tossed mariner into port. All these things and many more come from the "*Bacon family*." In short, every inch of them is made to contribute in some way to the general good, with perhaps the trifling exception recently demonstrated to the Elyria Natural History Society, that "you can't make a whistle out of a pig's tail, no how you can fix it."

Again: some folks accuse pigs of being filthy in their habits and negligent in their personal appearance. But, whether food is best eaten off the ground or from China plates, is, it seems to me, merely a matter of taste and convenience about which pigs and men may honestly differ; they ought then to be judged charitably. At any rate, pigs are not filthy enough to chew tobacco,

nor to poison their breath by drinking whiskey. And as to their personal appearance, you don't catch a pig playing the dandy, nor the females among them picking their way about this muddy village after a rain in kid slippers.

But I must confess that swine in their notions of medicine are not strictly orthodox. To be sure, they don't like the hot water and steam practice, never submitting to it quietly until it is all over with them. But neither do they approve of the bleeding and blistering operations of the regular practitioners. Surgery, too, they don't go for, having in particular, a mortal antipathy to operations about the throat. The truth is, hogs show a decided preference for hydropathy; for this they often go the "whole hog;" and if what history says, of a certain old king Bladud, be true, to them belongs all the glory of discovering the "water cure" system.

Notwithstanding their heterodox notions, hogs have some excellent traits of character. If one chances to wallow a little deeper in some mire hole than his fellows, and so carries off, and comes into possession of more of this earth than his brethren, he never assumes any extra importance on that account, neither are his brethren stupid enough to worship him for it. Their only question seems to be, is he still a hog? if he is, they treat him as such.

And when a hog has no merit of his own, he never puts on aristocratic airs, or claims any particular respect on account of his family connections, and yet some *hogs* have doubtless descended from very ancient families. They understand full well the common sense maxim, "every tub must stand upon its own bottom."

Another remarkable fact which I cannot in justice to my constituents omit to mention, is, that pigs are totally devoid of all prejudice against color. With them, white pigs, sandy pigs, spotted pigs, or black pigs, all stand upon an equal footing. The good old Jeffersonian doctrine of equality, is not regarded by them as a mere 'rhetorical flourish,' nor do they question the truth of Cowper's lines:

"Skins may differ, but affection  
Dwells in white and black the same."

In fact, I have no doubt that if the good people of Ohio were but half as free from this unjust and cruel prejudice, as those whom I have now the honor to represent, our Black Laws would soon be repealed. And after this, if any of you see a man with his prejudice against color 'sticking out,' I trust you will be ready to feel what a pity it is, that such a man should not have in this respect, half the decency of common swine.

I have now only one or two petitions to present before I come to read the award of premiums. The first is that every man who keeps hogs, will keep them well and keep them up.—By neglecting these things it happens that pigs are often found in somebody's corn field or potato patch, and in consequence, all the boys and

dogs that can be started, are mustered for the chase, the boys throwing stones and clubs and the dogs making "terribly free with ears." This may all be capital fun for boys and dogs, but the poor sufferers regard it as *capital punishment*.—Now, it is respectfully submitted, whether good morals among pigs, as among men, would not be better secured, if instead of adopting cruel and brutish measures, every one was provided with a home of his own and plenty to eat.

The second petition interests mankind as much as the swine themselves. It is to the effect, that when the time comes for hogs to lay down their lives, they may do it as quietly as possible, without dogging or running. By attending to this request you not only avoid giving unnecessary pain, which is a duty we owe to all animals, but it will save the world from the annoyance of a great many discordant sounds, and your pork will be more wholesome for food, and save better in your barrels.

NORTON S. TOWNSEND, *Ch'n.*

#### Choice Flock of Saxons.

[The following letter from Daniel Rogers, relating to his fine flock of Saxon sheep, was read before the Farmers' Club of the American Institute. It may prove a desirable flock for some of our fine wool growers to resort to, to procure an infusion of new blood. We copy from the N. Y. Farmer and Mechanic.]

HOOSICK, RENS. Co., Sept. 22, 1847.

MR. T. B. WAKEMAN, *Cor. Sec. Am. Institute:*

Sir,—I had the pleasure to receive a note from you a day or two since, giving my flock of sheep higher honors than I had ever claimed for them. Your informant is mistaken in giving my flock the character of the best fine woolled sheep in the country. I freely admit that there are others which surpass it; but it has merits not unworthy of notice, the most important of which are, constitution, weight, and fineness of fleece. My sheep are tough, hearty and stand all the rigors of our northern climate without any "peculiar pampering." I feed in winter on good sweet hay twice a day, and generally once with straw when the weather is mild. No grain is fed except to lambs, until about the first or middle of March, when I commence with oats, feeding at the rate of three-fourths of a bushel to a hundred, discriminating as to condition. My lambs are dropped about the middle of April, and weaned generally by the first of September. I wash my sheep as early in June as the weather will admit, and shear when dry. They run on upland pasture during summer, giving me no farther trouble than to salt regularly once a week, at the rate of two quarts to the 100, and to change from one field to another. I give my sheep ample pasturage always. He who would starve any animal does not deserve the name of human.—

My flocks seldom consist of more than 100 or 130 in winter, and in summer about 150 are permitted to run together. This is briefly the way I manage my flock.

My sheep are pure Saxon and Saxon Merino, but the Merino blood is, from long and careful breeding, nearly extinct. It is twenty years since I commenced the business of growing fine wool, and have so well studied and practiced the art as to flatter myself that I have arrived to some degree of excellence. I have improved my flock by purchases from that of the late Mr. H. D. Grove, and now it partakes of the character of his flock (now sold) which was so highly distinguished and so well known.

I have disposed of my wool for the last fifteen years, with few exceptions, to Mr. Samuel Lawrence, of Lowell, Mass. I have just sold him my clip for this season, and have not a sample to send you which would do any justice to my flock.—He is thoroughly acquainted with my wool, and I cheerfully refer you to him for any information respecting its manufacturing properties. I will also request him to forward some entire fleeces for exhibition at the Institute.

I am, sir, your obedient servant,

DANIEL ROGERS.

#### Experiments with Clover and Timothy Seed.—

Desirous of learning, by direct trial, at what depth clover and timothy seed would germinate, I made a narrow trench in a favorable situation, three and a half feet long, increasing in depth from the surface at one to the other end, where it was six inches deep. The bottom of it was therefore an inclined plane and was made smooth and even, by pressing a straight edged board forcibly upon it. Thus prepared, the seed was sowed thickly in the trench, its whole length.—In twenty-four days, at an average noon temperature of forty-five degrees, the plants appeared at the surface for four inches from the shallowest end towards the deepest part of the trench; and afterwards continued to appear from still deeper portions of the ground for seventeen inches, when it wholly ceased to vegetate. Three months have now elapsed, and not a leaf has shown itself beyond the point just named. The clover and timothy sprouted alike, and ceased to germinate at the depth of two and a half inches. The plants are now nearly a foot high at the shallow extremity of the trench; and diminish in stature as the trench deepens, the lowest being about five or six inches in height. The intelligent farmer will, of course understand the object, and appreciate the value of this experiment.

Some of the same seed was scattered on the ground, at the same time, and left uncovered.—It vegetated in due season; its radicles, from an eighth to a fourth of an inch long, lay exposed to the snow and frost for some time, and finally found their way into the earth.—*Southern Planter.*

J. T. P.

**Important Invention.**

**Improvement in Preparing Wheat and other Grains for Flouring.**—Mr. S. Bentz, of Boonsboro', Maryland, has invented a machine for preparing wheat for flouring, which appears likely to be highly useful. He has forwarded to the Executive Committee of the N. Y. State Agricultural Society, samples of grain which have passed through this process, and the Secretary, Mr. Johnson, has furnished us the following account of the machine:

"The improvement consists in taking the outer coating or bran from the wheat kernel previous to grinding. Its advantages are said to be—improving the ordinary kinds of red wheat from 5 to 15 cents a bushel—making from them as good and fair flour as is now made from the best varieties. It also saves in each barrel of flour from 40 to 52 pounds of wheat. A great saving of time in grinding is secured. It produces also the best hot climate flour known.

"Samples of wheat as grown, and with the bran off, may be seen at the Agricultural Rooms, and the attention of farmers and millers is invited to an examination of the specimens. The Executive Committee have awarded to Mr. Bentz a diploma. They hope to be furnished hereafter with a full account of the process, with samples, and with the results."—*Albany Cultivator*.

**Important Process.**—Mr. S. Bentz, of Boonsboro', Md., has sent us two papers containing samples of wheat. No. 1 is wheat in the natural state, as grown with the bran on: No. 2 has the bran taken off, and is as nicely denuded of its outer coating as is pearled barley. He has also sent us a third paper containing bran taken off of sample No. 2. Mr. Bentz is the inventor of the process by which this operation is performed; and without pretending to an extraordinary knowledge in the art of milling, we are free to admit that his improvement appears to us, what his circular designates it, an "important" one. He affirms that all varieties of wheat, white, red, and yellow, are at once improved from 5 to 15 per cent. by the process, and that the red and yellow wheats will make as good and fair meal as the white varieties now do. We, of course, cannot be presumed to form any definite opinion upon the validity of his conclusions, but judging by the sample of unhulled, and hulled wheat, we should be disposed to yield our acquiescence in the justness of his declaration, and we are the more ready to yield this point, as by the separation of the outer coating from the farinaceous parts of the berry, nearly all the coloring matter being removed, there can be but little left calculated to discolor the flour made from it.

Among the advantages claimed for this process, the circular of Mr. Bentz sets forth that a saving in time in grinding is effected from 25 to 50 per cent., while from 40 to 52 lbs. of wheat is saved in each barrel of flour: and that his system im-

parts to flour made by it the capacity of keeping in hot climates. This opinion he predicates upon the hypothesis, that it is the bran which remains in all meal ground after the old method which causes it to sour. This opinion derives support from the fact, that what is termed *Dyspeptic Flour*—flour containing the bran—will not keep longer than a few weeks without becoming sour.—Why this is so, we are not chemists enough to determine, and only note the fact as one which has come under our observation.—*Am. Farmer*.

**POTATO ROT.**—*Lime a Preventive of Potato Rot.*—Dr. Cotton Mather wrote over the door of his study in large characters, "Be Short;" and one said, who well knew the truth thereof "Brevity is the soul of wit." Now my subject is not a very witty one, but may be useful, nevertheless, lest I should fail to follow your favorite maxim, "Be short," I will proceed. This year I manured my patch well, plowed deep, planted good sized cuttings of round pink eyes. In ten rows I strewed quick lime, about the rate of one bushel per acre, upon the seed, eight rows of the same seed, and equally good soil, adjoining the others, no lime; now the result is, the limed potatoes are dry, mealy, and white as pop corn, in fact are of such a quality that an Irishman's heart would leap, and his eyes glisten with delight at the sight and taste of the "praties." Now view the other side of the picture: the other eight rows, without lime, are *wishy washy*, watery, tasteless, only fit for hogs. In the garden I tried the same experiment, with the like results. Try it, my fellow potato grower, the expense is small, and will not be thrown away. I have not found many diseased potatoes this year, about a bushel in fifty. So much for "Potato-ology."—*Ohio Cultivator*.

**How to whiten Linen.**—Fruit-stains, iron mould and other spots on linen, may be removed by applying to the part, previously washed clean, a weak solution of chloride of lime or of soda, oxalic acid, or salts of lemon, in warm water, and it often may be done by merely using a little lemon juice. The part which contained the stain or spot, should shortly after be thoroughly rinsed in clear, warm water (without soap,) and immediately dried in the sun.

Linen that has acquired a yellow or dingy color by careless washing, may be restored to its former whiteness by working it well in water to which some *strained* solution of chloride of lime or of soda has been added, observing to well rinse it in clean water, both before and after the immersion in the bleaching liquor. Never attempt to bleach *unwashed* linen and avoid using the liquor too strong, for in that case the fabric will be rendered rotten.—*Am. Ag.*

The potato rot has destroyed nearly the whole potato crop in Nova Scotia and Newfoundland.



**Remedies against Moths.**

These very troublesome and destructive little depredators may, with a little trouble, be effectually removed, and rooms, drawers, &c., be kept free from them for years. The hints given in the following remarks from the London Magazine will be valuable to those good housewives who have not hitherto availed themselves of similar means for the extermination of this insect.—The writer says: "It is an old custom with some housewives to throw into their draws every year, a number of fir cones, under the idea that their strong resinous smell might keep away the moth. Now, as the odor of these cones is due to turpentine, it occurred to Reaumur to try the effect of this volatile liquid. He rubbed one side of a piece of cloth with turpentine, and put some grubs on the other; the next morning they were all dead, and strange to say, had voluntarily abandoned their sheaths. On smearing some paper slightly with oil, and putting this into a bottle with some of the grubs, the weakest were immediately killed; the most vigorous struggled violently for two or three hours, quitted their sheaths, and died in convulsions. It was soon abundantly evident that the vapor of oil or spirits of turpentine acts as a terrible poison to the grubs. Perhaps it may be said that even this remedy is worse than the disease, but, as Reaumur justly observes, we keep away from a newly painted room, or leave off for a few days a coat from which stains have been removed by turpentine, why therefore can we not once a year keep away for a day or two from rooms that have been fumigated with turpentine?"

It is however surprising, how small a quantity of turpentine is required; a small piece of paper or linen just moistened therewith, and put into the wardrobe or drawers a single day, two or three times a year, is a sufficient preservation against moths. A small quantity of turpentine dissolved in a little spirits of wine (the vapor of which is also fatal to the moth) will entirely remove the offensive odor, and yet be a sufficient preservative. The fumes of burning paper, wool, linen, feathers, and of leather are also effectual, for the insects perish in any thick smoke; but the most effectual smoke is that of tobacco.—A coat smelling but slightly of tobacco is sufficient to preserve a whole drawer. We trust our fair readers will not scold us for thus affording their husbands or lovers an additional excuse for perpetuating a bad habit. The vapor of turpentine and the smoke of tobacco are also effectual in driving away flies, spiders, ants, earwigs, bugs and fleas. The latter tormentors are so abundant on the continent, as frequently to deprive the weary traveler of his night's rest. If he would provide himself with a phial, containing turpentine and spirits of wine in equal parts, and would sprinkle a few drops over the sheets and coverlid before retiring to rest, he will probably have reason to be grateful for the hint. Foreigners are in the habit of smoking in their bed-rooms

—a habit which excites surprise and disgust in England; it will now be seen, however, that there is a reason for the practice.—*Exchange.*

**Method of Determining the Weight of Cattle.**

—The following method of ascertaining the dead weight of cattle by measurement when alive, has been adopted to a considerable extent. It is found to be an expeditious mode; and if not to be implicitly depended upon, at least furnishes a very important assistance to the judgment of the dealer.

**Rule.** Take the girth of the beast by measuring round with a string or tape close behind the shoulder-blade, and the length by measuring from the fore part of the shoulder-blade, along the back, to that bone of the tail which is in a perpendicular line with the hind part of the buttock. Multiply the girth (in feet) by itself, and that product by the length, and then again by 42.—The last product, divided by 100, will give the weight in Smithfield stones of eight lbs. each. If stones of 14 lbs. are required, the multiplier will be 24 instead of 42.—*Baxter's Library.* A. K.

**Iron Fences.**—Iron wire is now used in the construction of fences, and the Westminster (Md.) Carolonian gives the following description of the manner in which it is adapted to this purpose:—

"The posts are about one half the ordinary size, planted firmly at the distance of ten feet apart, with nine strands of wire drawn tightly through a half-inch auger hole, and tightly plugged at each hole; the wire is of the size of that used for the handle of the Yankee bucket, and to combine them more firm, wire of a lighter description is wound through the middle, which prevents the hogs from separating them and creeping through. The whole expense of this fence does not exceed twenty-five cents per pannel of ten feet; and for neatness and durability, cannot be surpassed by any thing in timber."

**Pumpkin Butter.**—In answer to the inquiry of "Mary," as to the best mode of making pumpkin butter, I would send you the following, which is our plan, and which suits our taste very well. Strictly speaking it is not pumpkin butter, but we call it such. To one barrel of sweet cider, boiled down about one-third, take two bushels of pumpkins, cut in pieces as you would apples, (peeled and cored of course,) and if your kettle be large you can put them nearly all into the cider at once, but if small, boil a part of them soft in cider in another kettle, (copper or brass,) and as it boils down put the balance in, stirring it all the time, until you boil down to about 10 or 12 gallons. Just before taking off, spice to suit the taste. We put in about one half-pint of ground cinnamon to the above quantity. If you know a better plan than the above, which doubtless you do, please throw this under the table and let us have it. MARTHA.

—*Ohio Cultivator.*

**Improvement in feeding Cattle.**

MR. BATEHAM:—I wish to suggest one improvement in the feeding of cattle in winter, which may prove valuable to the farmers of our State, and is gaining much favor in Germany; I mean the feeding of self-heated [fermenting] food. I have seen the manner of doing it, and the saving and prosperous results of it in two places in Europe; I found it practised in the Orphan's Institute of Langeneorf, near Veissenfels, in Prussia, and afterwards on a large farm belonging to Mr. Shock, in Girdengossa, near Leipzig, in Saxony, where I acted as overseer before I came to this country. We had three boxes [or bins] of about one hundred and sixty cubic feet each; into which the food was jammed, after having been prepared in the following manner. We took any kind of roots on hand, (as beets, carrots, turnips, &c.,) cut in slices by a vegetable cutter, and chaff, dry pods of rape, hay and straw, cut by a straw cutter; which ingredients are mixed well, and sprinkled with water, so as to have it in a moist condition.—This mixture, after being jammed well in the box, is covered tight and left till the third day, when it is fed to cattle three times a day. The second day the second box is filled and taken out the third day, and so on. When taken out, this food has a pleasant odor, and develops a heat something like that of boiled food; and I can assure every farmer that the cattle like it very much, and keep in first rate condition on it. That there is a great saving, is clear from the fact that there is no such waste as will result from feeding uncut hay or straw, and this latter ingredient will be rendered much more nutritious and palatable by this operation.

**Habits of Animals.**—You cannot alter the nature of an animal by changing its food. It will still belong to the family. In this particular, bees are better instructed. When they lose their queen bee—which is an entirely different animal from the working bee—if you present another within twenty-four hours they will not accept her nor obey her. They prefer taking an ordinary grub, before he becomes a flier, and feeding it in a particular way, and when it leaves the grub state, it becomes a queen bee, and they always suffer themselves to be governed by her.

The habits of ants are extremely curious. We all have heard of ant houses, sometimes twenty feet in diameter, filled with halls and rooms of great strength. These and beaver dams are constructed upon strictly mechanical principles.

In some insect species, the males have wings and the females have none. This is the case with the glow worm and the females have the property of emitting a phosphorescent light, and were it not for this, the gentleman glow worm would not find his way to his lady's chamber.—The ostrich, unlike other birds is not provided with the means of setting down. She cannot

therefore hatch her eggs, but buries them in hot sand, and leaves nature to hatch them for her.—Some birds build no nests, like the cuckoo, which deposits her eggs in the nest of other birds—but she knows enough always to select the nests of birds that have bills shaped like her own, for then she is assured her young will have the same kind of food as she will procure.—*Scientific Amer.*

**Sore teats in Cows—An easy cure.**—There are probably but few farmers in New England numbering half a dozen cows, on which this troublesome disease is not more or less frequent. The irritation it produces occasions no small inconvenience to the milker, as well as suffering to the animal and loss of milk.

For the cure of sore teats, a friend long engaged in the dairy business in the State of New York, informs us that the following preparation is an infallible remedy, and should always be kept on hand, and applied occasionally, as circumstances may demand. When this disease appears in warm weather, its virulence is often greatly increased by the teasing of insects, and in such cases an ounce of assafœtida should be added. The disease does not always affect the udder—being in many instances confined to the teats, and when this is the case, the latter should be washed in a solution of salt, and the operation repeated till you affect a cure.

Ointment of sweet elder, 4 ounces; spirits of turpentine, (*fresh*,) 1 ounce; yellow barsilican ointment, 4 ounces.

Incorporate thoroughly, and apply the mixture warm to the teats and udder.—*Maine Farmer.*

**Co-operation of the Wife.**—There is much good sense and truth in the remark of a modern author, that no man ever prospered in the world without the co-operation of his wife. If she unites in mutual endeavors, or rewards his labor with an endearing smile, with what confidence will he resort to his merchandise or his farm, fly over lands, sail upon the seas, meet difficulty and encounter danger, if he knows he is not spending his strength in vain, but that his labor will be rewarded by the sweets of home! Solitude and disappointment enter the history of every man's life; and he is but half provided for his voyage who finds but an associate for happy hours, while for his months of darkness and distress, no sympathizing partner is prepared.—*Dollar Newspaper.*

**A durable and cheap Cement.**—Take two parts of fine and clean ashes, three parts of pure clay, and one part of sand; mix all well together; then add linseed oil, and have all intimately mixed to the consistence of thin mortar. This, if well applied will resist the inclemency of the weather, and will be found useful to stop the leaks in gutters on the roofs of houses, and where buildings join together. S. L.

—*Prairie Farmer.*

### Signs of a Prosperous Farmer.

1. When a farmer is seen marrying young, it shows that Providence helps those who help themselves, and that in future he will have "helps" of more kinds than one.
2. When lights are burning in his house before break of day, in the winter especially, it shows that the day will never break on his "breaking" in the winter of adversity.
3. When you see his barn larger than his house, it shows that he will have large profits and small afflictions.
4. When you see him driving his work instead of his work driving him, it shows that he will never be driven from good resolutions, and that he will certainly work his way to prosperity.
5. When you see in his house more lamps for burning lard or grease, than candlesticks for more expensive purposes, it shows that economy is lighting his way to happiness and plenty, with that light which should enlighten every farmer into the world.
6. When he has a small house, separate from the main building, purposely for ashes, and an iron or tin vessel to transport them, it shows that he never built his dwelling to be a funeral pile for his family and perhaps himself.
7. When his house is boarded inside and out, it shows that he is "going the whole hog" in keeping plenty inside his house and poverty out.
8. When his sled is housed in summer and his farming implements covered both winter and summer, it plainly shows that he will have a good house over his head in the summer of early life and the winter of old age.
9. When his cattle are properly shielded and fed in winter, it evidences that he is acting according to scripture, which says that "a merciful man is merciful to his beasts."—*Ex. paper.*

### Slobbers in Horses.

We mentioned, a few months ago, our belief that the slobbers in horses was caused by feeding on white clover, and adduced as a proof that we had a horse, in which, when put in a field that had white clover in it, the slobbers would be brought on in half a day, but if put in a field where there was no clover, the slobbers did not appear. In the last number of the *Genesee Farmer* we find a communication from J. Scott, of Bourbon county, in Kentucky, who attributes the slobbers to the second crop of clover, either white or red. He says horses that feed exclusively on timothy or blue grass, (the blue grass is our spear or spire grass,) never slobber in his section.

He also adds: "I have ascertained the *horse weed* to be a certain preventive; and if horses can get it, they will be cured in a few hours.—The horse weed, as we call it, (not knowing its botanical name) grows very abundantly in grain fields, but is soon exterminated in pastures by all

kinds of animals—and in its absence slobbering soon follows. But if a sufficient quantity of this weed can be procured, the disease may be arrested in a few hours."

We would like to know the true name of this "horse weed." The manner in which this disease acts (for we consider it a disease, though perhaps a worse one would ensue if the slobbers did not) is not known. We do not know whether any dissections were ever made of a horse that was killed or died while the slobbers were upon it. If any of our subscribers or readers have ever made any examinations of the kind, we have quite a curiosity to learn the result.—*Maine Farmer.*

*Improvement of Wet Land.*—The Mark Lane Express gives an account of the improvements made on the farm of Lord Stairs, in Wigtonshire. One part was drained, subsoiled, limed, and thoroughly pulverized, and then produced forty bushels of wheat to the acre, where only twelve were raised before; and carrots, turnips, and mangel-wurtzel on the land averaged twenty-three tons to the acre. A morass, a part of which had been cut over for peat, for thirty years, was drained, pared, burned, limed, manured, and sown to oats. Crop, forty bushels to the acre. Next year top dressed with gravel and sand, limed, manured, ploughed, and two acres sowed to turnips, Dale's Hybrid; some of them weighing fifteen pounds each. The crop was forty tons per Scotch acre. [Four Scotch are five English.] Seven acres planted to potatoes produced five hundred and seventy-six bushels per acre. Previous to improvement, sixty acres of this land was barely sufficient to pasture two cows and their calves.

*Bloated Cattle Cure.*—A friend of ours who, by the way, is a person of much observation, and who, withal, has had considerable experience lately in the management of neat cattle, informs us that last August he noticed one of his young cattle much bloated, evidently in great agony, and groaning loudly at every breath. His first movement was to cut off a small portion of her tail. He then administered a strong dose of thoroughwort, with a small quantity of tansey, which immediately started the wind; a second bottle was then poured down, and the animal turned into the yard, and driven briskly about for a few minutes, when the bloat wholly disappeared, and the animal was in a short time as well and hearty as ever. This is a very simple remedy, and we have frequently heard others assert, generally if not always, an efficient one.—*Maine Farmer.*

*Bird's Nest Pudding.*—Put into three pints of boiling milk, six crackers pounded fine, and one cup of raisins; when cool, add four eggs well beaten, a little sugar, and four good sized apples, pared, with the core carefully removed. To be baked, and eaten with warm sauce.



**Boiled Flaxseed vs. Linseed Meal.**

The following paper, on "Linseed, Linseed Cake, and Meal, for fattening Cattle and rearing Calves," is by Messrs. M'Adam & Co., general millers, Douglass street, Belfast, who have for some years seen it practiced with the best results:—

"Almost every person in the habit of feeding cattle for the butcher is acquainted with the fattening qualities of linseed cake, but rearing calves with linseed meal has only been introduced in this neighborhood within the last three or four years; it is now quite established, and a great saving is the result.

Half a pound of this meal is sufficient for a calf daily, and this costs from one half-penny to three farthings; while a quantity of milk, containing the same proportion of nutriment, would cost eight-pence to ten-pence per day; a saving would thus be effected of at least six-pence a day on each calf, which is 3d. 6d. per week for one calf, and £8 10s. per week for 20 calves; and this for three or four months, amounts to a sum worth saving.

This linseed meal is the cake ground; the best way of using it is to steep at the rate of quarter of a pound for each feed, in cold water, for 20 or 24 hours; then to dilute with warm water to the temperature of new milk, making a gruel about equal in bulk to the milk usually given—if any milk be added, a pint of each feed is quite enough.

The general report of our farmers and dairy-men, who have continued the use of this meal for rearing calves during the last three or four years, is, that the calves are more healthy when fed on it, than formerly when fed on milk, and that there are fewer deaths; it is very nutritive, and at the same time keeps the stomach and intestines in a cool and wholesome condition."—*Eng. Mark Lane Express.*

**The Slippery Elm.**—One of the most valuable, as it is well known article in our country, is the slippery elm, *Ulmus Fulva*. All our apothecaries keep it, both the flower and the bark. It is generally called slippery elm, red elm, or rough leaved elm. It is indigenous to our country, and what is remarkable, yet but little known, it contains a great amount of human nourishment. It is medicinal also. It is an excellent substitute for water, and you can carry in your waistcoat pocket sufficient to subsist upon for ten days.—The shipwrecked sailor, the soldier in Mexico, and the traveller on the prairies should never be without it. It always mitigates hunger, and is nourishment and drink. Let no ship go to sea without it, no traveller fail to have it with him, no army march without it.—*Farmer and Mech.*

**Steam Plough.**—A French paper, *La Semaine*, announces the invention of a steam plough, or rather the mode of digging by means of steam, from which the most wonderful results are anti-

cipated. The inventor is a young medical man, named Barat. The Journal states that one of the two horse power was in operation at the residence of the maker, who was constructing another of double the power. The machine proceeds along the field, and digs the ground with the greatest precision. Two beams furnished with five mattocks each, act successively upon the soil, loosening it to the depth of 12 or 15 inches, and pounding it as small as compost. By using only one of the beams, a tillage of the usual depth can be effected.—*Farmer and Mechanic.*

**Failure of the Alpaca Project.**—In the June number of this journal, it was stated that the services of J. D. Williamson had been secured by the committee appointed by the American Agricultural Association, for the purpose of introducing the alpaca into this country, and that he was to proceed forthwith to Peru, free of charge, in one of the United States ships, for the procurement of the animals, &c. We are now authorized to announce, from one of the committee, that, owing to the state of the funds of the Association, it was not deemed expedient to attempt the introduction of the animals without more efficient means, and that the funds already raised for the object will probably soon be returned to the subscribers.—*Am. Agriculturist.*

**Pasturing Wheat—The Fly.**—Our wheat crop the past season was a good deal injured by the fly, as well as by the winter; and the inquiry arises, whether pasturing with sheep when the fly is at work in the spring is not a partial protection against the fly. I had two fields that looked equally well in the second month and part of the third. In one of these I turned my sheep, and that field produced a fair crop, while the other was so much injured that it did not produce a fourth of a crop. JOHN BATTIN.

REMARKS.—Pasturing wheat fields in the spring, has often been recommended, and successfully practiced as a protection against the fly.—Ed.—*Ohio Cultivator.*

**Sprinkling Ashes on Potatoe Tops.**—A correspondent (Mr. Kendall) informs us that Mr. James Stewart, of Baileyville, tried the following experiment very successfully on his potatoes the last summer. As soon as he had discovered the rust had struck the tops of his potatoes he strewed ashes on twenty rows of them. When he dug them he found them all sound, while about a quarter part of the rest were affected with the rot. Every fact that will lead us to success in warding off this calamitous disease in the potato is valuable.

The desire to live without labor and in luxury is one of our greatest sins; it fills our courts, jails, and poor houses; it demoralizes our youth, and brings the aged with sorrow to the grave.

¶ We announce to our readers the transfer of the Michigan Farmer to a new Editor and Proprietor, whose prospectus for the ensuing volume will be found below. Mr. Isham has formerly been favorably known to the public as an editor, and brings to the task, together with editorial experience, a practical acquaintance with farming, and a hearty zeal for the interest in whose behalf the paper is destined to labor. It is gratifying to us to know that the station which a personal misfortune has compelled us to relinquish, will be filled by one so capable.

Agreeably to the announcement at the commencement of the present volume, the twelve numbers which compose it will have been issued in nine months, and the volume be closed before the first of January 1848. With the new year, commences another volume, when the change of proprietorship takes place. Mr. Isham will assume the editorial charge with the next number.

We embrace this occasion to return our thanks to those liberal friends in various parts of the State, who have from time to time lent us their aid, some by increasing our list of subscribers, others by giving the no less necessary help of their contributions for our columns. On the efforts of such, the prosperity of an Agricultural paper must ever greatly depend.

**TO THE FARMERS OF MICHIGAN.**

The subscriber, having been announced as the future Editor of the Michigan Farmer, takes occasion to state, in brief, his views of what a periodical of this kind should be.

In the general, it should embody, in a comprehensive form, information relating to improvements in agriculture in all its departments,—whether such improvements have respect to the principles of the science, their practical application, or to the implements of husbandry.

There should be *originality*, to some extent, in its columns. Its conductor should be able to turn to profitable account the multitudes of facts which are continually accumulating under his observation, methodizing, and bringing them into subservency to some practical end, and thus opening new and untrodden fields to the enterprising and the industrious.

It should be adapted to the popular mind—not so scientific as to be unintelligible to the mass, nor so unscientific as to exert no elevating influence upon them.

Especially should it be adapted to its locality, to peculiarities and varieties of soil and circumstances. A publication well suited to the circumstances of an old agricultural district, would be but ill adapted to the wants and necessities of a new country like our own.

It should give, as far as possible, a true and impartial account of the state of the crops and of the markets, and should be eagle-eyed to detect, and prompt to expose the tricks of speculators.

It should, he thinks, also contain a spice of general intelligence, so condensed, that it will not, to any appreciable extent, encroach upon the agricultural interest, and yet sufficient for all the purposes of general information.

The Farmer will be published semi-monthly, as formerly, after the first of January, when a new volume commences.

**TERMS.**

In advance, per year,	\$1.00
After three months,	1.25
After six months,	1.50
After nine months,	1.75

To clubs the same terms will be allowed as heretofore, viz : for every four dollars remitted strictly in advance, five copies will be sent, and for larger sums in the same proportion.

No subscription taken for less than one year, nor discontinued till all arrearages are paid.

N. B. Editors in this State to whom this prospectus is sent marked, are respectfully requested to publish it. As our exchanges will be numerous, we shall be able to reciprocate favors of this kind with but few political papers. We shall, however, feel under obligations to extend this courtesy to those who insert our prospectus, if they wish.

WARREN ISHAM.

Detroit, Dec. 1, 1847.

### Remittances.

All remittances for past dues, including those for the present volume, will continue to be made to "Williams & Hurlbut." Subscribers in arrears will oblige us by sending their respective amounts within a month from this date. It is hoped, under the circumstances, that none will make it necessary to repeat this reasonable call.—Whenever it would be a matter of convenience, remittances for the next volume may be enclosed in letters to us, which we will pass to Mr. Isham.

**Remittances** may be sent under the frank of Postmasters. Receipts will be returned whenever requested.

## Market Intelligence.

### DETROIT PRICE CURRENT.

GRAIN.—Wheat at city mill-, bush.	\$0 75	80
Indian Corn,	31	85
Barley, at brewery,		37 1
Rye,	31	85
Oats,		22
Beans,	50	75
PROVISIONS.—Flour, bbl. from wagons,	\$ 4 25	1 3
Buckwheat, 100 lbs.		1 25
Indian meal, "		87 1
Hogs, 100 lbs.	\$3 00	63 50
Beef, "	\$2 00	23 00
Lard, lb. retail,		08
Butter, roll,		15
" firkin,	12	14
" retail,		16
Cheese, 100 lbs., Michigan,	\$5	06 25
" " Hamburg,	7 50	08 00
Eggs, doz.,		15
White fish, bbl.,	6 00	27 00
Trout, "	5 50	06 00
Potatoes, bush., retail,		37 1
Onions,		50
Honey, lb.,		12 1
SUNDRIES.—Wood, hard, cord,	\$2	08 25 50
Hay, ton,		8
Cranberries,		1 00
Apples, bushel,		75
" common,		37 1
" dried		1 25
Peaches, dried,	\$1 75	02 00
Clover seed, bush.,		84 00
Herd's grass do. do.		1 00
Flax " "		62 1
Ashes,		6
Salt, bbl.,	\$1	87 1
Lime, "		75

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**MICHIGAN FARMER.**

VOLUME V.—NEW SERIES.

PUBLISHED BY WILLIAMS AND HURLBUT, DETROIT.

**H. HURLBUT, EDITOR.**

**TERMS.**—One copy for 50 cents—Five copies for \$2—Eight copies for \$3—and at this last rate for any larger number; payable in advance. Subscriptions commence with the volume. Letters containing remittances in current bank bills may be sent at the risk and expense of the publishers.